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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/575,529	05/22/2000	Yoshiaki Inoue	Q58052	2338

7590 07/14/2004

Sughrue Mion Zinn Macpeak & Seas PLLC
2100 Pennsylvania Avenue N W
Washington, DC 20037-3213

EXAMINER	
ROGERS, SCOTT A	

ART UNIT	PAPER NUMBER
2626	

DATE MAILED: 07/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/575,529	INOUE, YOSHIAKI	
	Examiner	Art Unit	
	Scott A Rogers	2626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 February 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-15* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *22 May 2000* is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *8*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Response to Arguments

Applicant's arguments, see from top of page 8 to middle of page 9 (claim 1, and bottom half of page 10 (claim 4), filed 23 February 2004, with respect to Curry (US 5696604), have been fully considered and are persuasive. The prior rejection of claims 1-12 has been withdrawn. Note with respect to claims 2, 5, 8, and 11, the Examiner made a typographical error and had intended to indicate that the claimed "second highlight percentage being at most 48%" corresponded to the last stage in dot growth 42" (not 40) in Fig. 5B in Curry.

The following is a new ground of rejection.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3, 10, 12, and 13-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Hamilton (US 5448366).

Referring to claim 1:

Hamilton discusses the known halftone printing art where the density or tone of a multi-valued color image (a single color component or a plurality of

color components) is represented by variations in the size of small dots in a pattern.

Hamilton discloses a method of tone reproduction of an image with halftone dots by forming dots arranged at regular intervals and having different sizes on an image reproduction medium based on a multi-valued image data, comprising the steps of:

growing the halftone dots in a circular or elliptical shape in a first transformation zone from a halftone percentage of 0 % to a first highlight percentage (Figs. 4A-4C);

growing the halftone dots while changing from the circular or elliptical shape to a square or rhomboidal shape in a second transformation zone from the first highlight percentage to a second highlight percentage greater than said first highlight percentage (Figs. 4D-4F);

growing the halftone dots in a square or rhomboidal shape in a third transformation zone from the second highlight percentage to a second shadow percentage (Figs. 4G-4I);

growing the halftone dots while changing from the square or rhomboidal shape to a circular or elliptical shape in a fourth transformation zone from the second shadow percentage to a first shadow percentage greater than said second shadow percentage (Fig. 5B); and

growing the halftone dots in a circular or elliptical shape in a fifth transformation zone from said first shadow percentage to a percentage of 100 % (Fig. 5B fills in completely at 100% density).

Note in applicant specification and drawings, halftone dots changing from the square or rhomboidal shape to a circular or elliptical shape in a fourth transformation zone from the second shadow percentage to a first shadow percentage greater than said second shadow percentage is depicted in Fig. 2 going from halftone dot 50e to 50f. This corresponds in Hamilton to going from the halftone dot in Fig. 4I to the halftone dot in Fig. 5B.

Referring to claim 3:

In Hamilton, when the halftone dots are grown in the square or rhomboidal shape, they are successively grown along each of the sides thereof thereby inherently minimizing any displacement of the center of gravity of the halftone dots as can be seen in Figs. 4D-4I.

Referring to claim 10:

The printed material expressing highlight and shadow areas of a subject with sizes of halftone dots, comprising a first, second, third, fourth, and fifth print section with the halftone dots grown as recited above with respect to the corresponding steps of method claim 1, is contemplated by Hamilton (see col. 1, lines 17-19).

Referring to claim 12:

Claim 12 corresponds directly to the features recited in claim 3 addressed above.

Referring to claim 13:

Hamilton discloses the application to color image data as noted above. The dots formed by Hamilton's technique are arranged at regular intervals and

have different sizes on an image reproduction medium (see Figs, 2D-2I and col. 4 line 61 to col. 5, line 2) based on the multi-valued image data (e.g., representing a color component or plural color components).

Referring to claim 14:

As can be seen in Figs. 4D-4I, angular portions of the square or rhomboidal dot shape maintain a substantially consistent angle.

Referring to claim 15:

As can bee seen in Fig. 5B relative to Fig. 4F-4G, the second shadow percentage is greater than the second highlight percentage.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 4, 6, 7 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hamilton as applied to claims 1 and 3 above, and further in view of Curry (US 5696604).

Referring to claim 4:

Claim 4 is the means plus function apparatus claim 1 corresponding directly to method claim 1. Hamilton discloses the apparatus 100 for performing

the method steps as set forth above with respect to claim 1, and therefore claim 4 is rejected for the same reasons as given above.

While the preamble of claim 4 refers to "a halftone plate", none of the limitations in the body of the claim refer to a halftone plate. However, Curry contemplates an apparatus for output of a halftone plate (see col. 3, lines 63-66).

Since Hamilton and Curry are in the same field of endeavor, it would have been readily obvious to one of ordinary skill in the art to have applied the halftone formation technique taught by Hamilton in the production of a halftone plate, in view of the association taught by Curry, in order to increase application of the Hamilton's halftone formation technique by allowing application to computer generated engraving plate devices.

Referring to claim 6:

Claims 6 correspond directly to the features recited in claim 3 addressed above.

Referring to claim 7:

Hamilton does not disclose a halftone plate expressing highlight and shadow areas of a subject with different halftone dots, comprising a first, second, third, fourth, and fifth halftone plate section with the halftone dots grown as recited above with respect to the corresponding steps of method claim 1. However, a halftone plate expressing highlight and shadow areas of a subject with different sizes of halftone dots is contemplated by Curry (see col. 3, lines 63-66).

Since Hamilton and Curry are in the same field of endeavor, it would have been readily obvious to one of ordinary skill in the art to have applied the halftone formation technique taught by Hamilton to obtain a halftone plate, in view of the association taught by Curry, whereby the application of the Hamilton's halftone formation technique is increased by allowing application to a computer generated engraving plate device that creates the halftone plate.

Referring to claim 9:

Claims 9 correspond directly to the features recited in claim 3 addressed above.

Claims 2, 5, 8, and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hamilton, or Hamilton in view of Curry, as applied to claims 1, 4, 7, and 10 above.

Referring to claims 2, 5, 8, and 11:

These claims specify that the second highlight percentage is at most 48% and said second shadow percentage is at least 52%. However, nothing in applicant's specification points to any critical reason or unexpected result owing to why these percentages are selected. Only examples are given of different halftone percentages (see pages 19-20). These percentages are merely a design choice and do not make the claims patentably distinct.

Therefore, it would have been obvious to one of ordinary skill in the art to have chosen the highlight and shadow percentages in Hamilton as a matter of design choice.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott A Rogers whose telephone number is 703-305-4726. The examiner can normally be reached on Monday-Thursday 6:00am-6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kimberly Williams can be reached on 305-4863.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to Customer Service at 703-306-0377. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SCOTT ROGERS
PRIMARY EXAMINER

12 July 2004